

### REMARKS

Applicant has reviewed and considered the Office Action mailed on February 25, 2003, and the references cited therewith.

Claims 1, 8, 9, 13, 14, 20, 21, and 30 are amended, no claims are canceled, and no claims are added; as a result, claims 1-30 are now pending in this application. The amendments to the claims are fully supported by the specification as originally filed. No new matter is introduced. Applicant respectfully requests reconsideration of the above-identified application in view of the amendments above and the remarks that follow.

Claims 1, 8, 9, 13, 14, 20, and 21 claims find support, for example, in the specification on page 8, lines 24-27, and in reference U.S. 6,320,222, which was co-filed and incorporated by reference in the original application of the instant application, in column 11, lines 10-16, for example.

### IN THE DRAWINGS

Corrected drawings are supplied herewith.

Enclosed are added Figures 4A-K, 5A-C, 6A-5O, 7, 8, and 9. These figures are from co-filed application 09/144,202, originally incorporated in its entirety, now issued U.S Patent 6,320,222. Figures 4A-K, 5A-C, 6A-5O, 7, 8, and 9 are Figures 1A-K, 2A-C, 3A-5O, 4, 5, and 6 of application 09/144,202, where the characteristics have been changed to avoid conflicting with characters used in Figures 1A,B-3 of the instant application. Character YXX of application 09/144,202, now issued U.S Patent 6,320,222 are characters (Y+3)XX of the instant application.

No new matter is introduced.

### IN THE SPECIFICATION

The specification, itself, including detailed description section was objected as failing to explicitly provide description and drawing of the subject matter as claimed in claims 1-30 of the present application.

The instant application incorporated, in its original filing, application 09/144,202 in its entirety, now issued U.S Patent 6,320,222. The instant application is amended to explicitly include material from the aforementioned application incorporated by reference. Characters

YXX of application 09/144,202, now issued U.S. Patent 6,320,222, are characters (Y+3)XX of the instant application. For example, 210 of U.S. Patent 6,320,222 is 510 of the instant application, and 704 of U.S. Patent 6,320,222 is 1004 of the instant application.

No new matter is introduced.

Double Patenting Rejection

Claims 1-30 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of U.S. Patent No. 6,320,222.

Application respectfully requests that these rejections be reconsidered in view of the amendments to the claims made herein.

A Terminal Disclaimer will be considered when all claims are indicated to be otherwise allowable.

First §112 Rejection of the Claims

Claim 4 was rejected under 35 USC § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time of the application was filed, had possession of the claimed invention; and/or as based on a disclosure which is not enabling. Applicant traverses this rejection.

The Office Action states “[r]e claim 4, specification including Patent 6,320,222 does not enable and support to form a transistor having a vertical body region on the first source/drain region, with the body region having a thickness of about 0.4 micron, as a fully depleted structure.”

In contrast, claim 4 finds support, for example, in Patent 6,630,222 at column 4, lines 63-65, and column 11, lines 30-49. Thus, Applicant request withdrawal of this rejection of claim 11, reconsideration and allowance of this claim.

Second §112 Rejection of the Claims

Claims 1-30 were rejected under 35 USC § 112, first paragraph, as based on a disclosure which is not enabling. Applicant traverses these rejections.

Applicant does not agree with the reason for these Office Action rejections. However, independent claims 1, 8, 9, 13, 14, 20, and 21 are amended to expedite prosecution of the instant application. These amended claims find support, for example, in the specification on page 8, lines 24-27. Thus, Applicant believes that the claims 1-30 overcome these rejections. Applicant requests withdrawal of these rejections to claims 1-30, and reconsideration and allowance of these claims.

Third §112 Rejection of the Claims

Claim 21 was rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicant believes that claim 21, as amended, provides proper antecedent basis. Applicant requests withdrawal of this rejection of claim 21, and reconsideration and allowance of this claim.

First §102 Rejection of the Claims

Claims 1-30 were rejected under 35 USC § 102(f) as being anticipated by the U.S. Patent No. 6,320,222 having the co-inventor named Wendell Noble. Applicant traverses these rejections.

Applicant's representative previously noted that "[e]lements of claims 1-30 not shown in Figures 1-3 are shown in the Figures of U.S. Patent No. 6,320,222. No new matter is introduced. Furthermore, in the detailed description for U.S. Patent No. 6,320,222, the material from column 4, line 55 to column 14, line 14 can be used to describe elements for claims to the embodiments of the instant application."

✓ The instant application is amended to include Wendell P. Noble as a co-inventor. An amendment is submitted with this response to correct inventorship under 37 C.F.R. §1.48(c), including submission of a supplemental oath affirming Mr. Noble as a co-inventor. Thus, 6~ rejections under 35 USC § 102(f) would not be proper. Applicant respectfully requests withdrawal of these rejections to claims 1-30, and reconsideration and allowance of these claims.

Second §102 Rejection of the Claims

Claims 1-30 were rejected under 35 USC § 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bertin et al. (6,060,746). Applicant traverses these rejections.

Applicant does not admit that Bertin et al. (hereafter Bertin) is prior art, and reserves the right to swear behind it at a later date. Nevertheless, Applicant respectfully submits that the claims are distinguishable over Bertin for the reasons stated below.

As amended, claim 1, in part, recites “forming a first source/drain region on the insulating layer on the substrate.”

Applicant can not find in Bertin a teaching or suggestion of forming a first source/drain region on an insulating layer on a substrate, as recited in claim 1. Thus, Applicant submits that Bertin does not anticipate claim 1, and claim 1 is patentable under 35 USC 102 over Bertin.

Bertin appears to deal with a power transistor, which is defined by Bertin in column 1, lines 55-60, “as a plurality of individual transistors of the same conductivity type that are formed on a common substrate, where the source electrodes each share a common conductive connection layer and the drain electrodes of the transistors also each share a common conductive connection layer.” Thus, in addition, to Bertin providing no teaching or suggestion of active regions, such as source/drains and body regions between source/drain regions, formed on insulating layers between the active region and a substrate, there is no motivation to do so. Forming an insulating layer as recited in claim 1, would be contrary to Bertin, since Bertin teaches forming active regions on a conductive layer, as demonstrated by the abovementioned definition of Bertin’s power transistor. Thus, claim 1 is non-obvious with respect to Bertin, and claim 1 is patentable under 35 USC 103 over Bertin.

As amended, independent claims 8, 9, 13, 14, 20, and 21 recite similar elements as claim 1 and are patentable over Bertin for the reasons stated above in addition to the elements of the claims.

Claims 2-7, 10-12, 15-19, and 22-30 are dependent on claims 1, 9, 14, and 21, respectively, and are patentable over Bertin for the reasons stated above in addition to the elements of the claims.

Applicant respectfully requests withdrawal of these rejections of claims 1-30, and reconsideration and allowance of these claims.

*First §103 Rejection of the Claims*

Claims 1-13 and 21-26 were rejected under 35 USC § 103(a) as being unpatentable over Noble et al. (U.S. 6,150,687) taken with Colinge (Article of “Reduction of Kink Effect...”). Applicant traverses these rejections.

Applicant notes that Noble et al., U.S. 6,150,687, (hereafter Noble) issued on 21 November 2000, which is after the priority date, 1 September 1998, of the instant application. Thus, the rejections under 35 USC § 103(a) is made relative to section 102(e). Applicant respectfully submits that Noble is not prior art with respect to the claims of the instant application. A reference asserted under 102(e), (f), or (g) that was commonly owned with an application at the time the invention was made, cannot preclude patentability under 35 U.S.C. 103 of the claims of the application when the application was filed on or after November 29, 1999. 35 U.S.C. 103(c); 1233 OG 55 (April 11, 2000). The instant application was filed on 25 January 2002, as shown by the attached copy of the Filing Receipt, which is after November 29, 1999. Noble and the instant present application were, at the time the invention was made, owned by, or subject to an obligation of assignment to, the same person.

Thus, Noble is commonly owned with the instant application and is not prior art with respect to the claims of the instant application. In addition, Colinge deals with a thin-film, fully depleted transistor configured horizontally, which is distinctly different than a vertical device as recited in the instant claims. Thus, combination of Colinge does cure deficiencies of a reference with respect to a vertical structure having a fully depleted body region, and such a combination would not teach or suggest all the elements of the current claims.

Therefore, for the reasons stated above, claims 1-13 and 21-26 are patentable over Noble in view of Colinge. Thus, applicant respectfully requests withdrawal of the rejections of claims 1-13 and 21-26, and reconsideration and allowance of these claims.

Second §103 Rejection of the Claims

Claims 14-20, 21, and 27-30 were rejected under 35 USC § 103(a) as being unpatentable over Forbes et al. (U.S. 6,097,065) taken with Colinge (Article of “Reduction of Kink Effect....”). Applicant traverses these rejections.

Applicant notes that Forbes et al., U.S. 6,097,065, (hereafter Forbes) issued on 1 August 2000, which is after the priority date, 1 September 1998, of the instant application. Thus, the rejections under 35 USC § 103(a) is made relative to section 102(e). Applicant respectfully submits that Forbes is not prior art with respect to the claims of the instant application. A reference asserted under 102(e), (f), or (g) that was commonly owned with an application at the time the invention was made, cannot preclude patentability under 35 U.S.C. 103 of the claims of the application when the application was filed on or after November 29, 1999. *35 U.S.C. 103(c); 1233 OG 55 (April 11, 2000)*. The instant application was filed on 25 January 2002, as shown by the attached copy of the Filing Receipt, which is after November 29, 1999. Forbes and the instant present application were, at the time the invention was made, owned by, or subject to an obligation of assignment to, the same person. In addition, the inventors of U.S. 6,097,065 are the same inventors of the instant application.

Thus, Forbes is commonly owned with the instant application and is not prior art with respect to the claims of the instant application. In addition, Colinge deals with a thin-film, fully depleted transistor configured horizontally, which is distinctly different than a vertical device as recited in the instant claims. Thus, combination of Colinge does cure deficiencies of a reference with respect to a vertical structure having a fully depleted body region, and such a combination would not teach or suggest all the elements of the current claims.

Therefore, for the reasons stated above, claims 14-20, 21, and 27-30 are patentable over Forbes in view of Colinge. Thus, applicant respectfully requests withdrawal of the rejections of claims 14-20, 21, and 27-30, and reconsideration and allowance of these claims.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney 612-371-2157 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date 27 May 2003

By David R. Cochran  
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop RCE, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 27th day of May, 2003

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